

WEEKLY EDITION

OF THE



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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

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The fare to the World's Exposition at New Orleans from Chicago and return (good for 15 days) is now only \$20. This will be an extra inducement to those who intend to go to the "Bee-Keepers' International Congress," to be held there on Feb. 24, 25 and 26. In response to many inquiries, we will now say that it is our intention to be present and take part in the deliberations. We hope there will be a large representation from the North.

The Rev. Wm. Ballantine, of Sago, O., has just published a new work entitled "A Practical Treatise on Bee-Culture." It is sold at 50 cents, in paper covers, and 75 cents bound in cloth. The author has done his part well, but the printer has made a botch of it.

We have had a "shower" of Postal Cards saying that the BEE JOURNAL of Dec. 31 was not received. By referring to the first page of the BEE JOURNAL for Dec. 24, it will be seen that it contained the index and closed the volume for 1884, being the fifty-second number for that year. As there were fifty-three Wednesdays (our day of publication) in last year, we published none for Dec. 31, and the first number for this year is dated Wednesday, Jan. 7, 1885.

Catalogues for 1885.—We have received the following:

James Heddón, Dowagiac, Mich.
F. A. & H. O. Salisbury, Geddes, N. Y.
B. J. Miller & Co., Nappanee, Ind.
J. S. Tadlock, Luling, Texas.
J. J. Hurlbert, Lyndon, Ills.
Illustrated Catalogue of the Plant Seed Co. of St. Louis, Mo., in English and German.

Absolute Phenol.

Many correspondents are enquiring what Mr. Frank Cheshire means by "Absolute Phenol" in his article on *Bacillus alvei*, or what is generally called "foul brood." We have responded twice to this inquiry that it is simply pure carbolic acid. Dr. James Dalziel writes the following on the point to the *New Zealand Bee Journal*, which we think will be interesting to our readers:

I need scarcely say that when I received the November number of the *Bee Journal* I at once read Mr. Cheshire's paper with very great interest, but when I reached the following sentences:—"Here a caution is needed. Carbolic acid is an impure phenol, and is useless. It contains creosote and creosols, and bees abhor it. Absolute phenol must be used. It is difficult rather to obtain," etc., I was considerably amused, and reminded of the following story:—An Englishman and a Scotchman, on a tour through Ireland, were conversing on vegetarianism; they were loud in their praises of potatoes as an article of daily diet (the Scotchman called them "taties," pronounced "taaties") and asked the Irishman for his opinion of them as vegetables. He replied that he could not altogether agree with them; potatoes and taties might do very well with English and Scotch stomachs, but he had once tried some potatoes and they agreed with his stomach so badly that he had to send for the doctor, and was very bad indeed for several hours; but there was a vegetable which he had eaten at every meal for years, and it had never disagreed with him yet, and that was—"spuds."

The difference between "phenol" and "carbolic acid" is the same as between "potatoes" and "spuds." "Phenol" is the French name, "carbolic acid" the English name for the same article, and "impure phenol" is "impure carbolic acid;" "pure carbolic acid" is "pure phenol." On this point the British Pharmacopœia is, I think, sufficiently good authority, it says: "Acidus carbolicus. Synonyma. phenic acid; phenol; hydrate of phenyl;" Any good dictionary will inform your readers that "synonym" is "another term signifying the same." As to the difficulty in obtaining, I think it can easily be gotten from any good chemist or druggist.

A little boy discovered a bee crawling about on his hand. Finally, the bee stopped for a moment, and, after remaining stationary for an instant, stung the little fellow. When the cry of pain was over, the little child said to his mamma that he did not care for the bee's walking about on him, but he did not like his sitting down on him.

Queries & Replies.

An Enthusiastic Welcome.

As we had every reason to expect, the initiatory number containing this new Department was received with the most enthusiastic endorsement. The opinions of the many practical honey-producers are worth much more than the opinion of any one person, no matter how much he knows or how successful he may be.

Again, much more care will be bestowed upon the questions, and more thought before answering, because every one knows there are others who are answering precisely the same question, and the answer records his judgment by the side of his contemporaries, to stand until the undeveloped and undefined future shall make all things clear, and decide who was right and who wrong.

As we have three belated replies of Query, No. 2, we will reprint that Query and give those first.

Bees Uneasy and Roaring.

Query, No. 2.—Dec. 16 was cold and windy, with the thermometer at zero; next morning it stood at 20 degrees above, the wind has ceased, and the bees were roaring as if it was in June. What caused the uneasiness? Is it a sign of diarrhoea?

DR. C. C. MILLER suggests the following: "Was it not the bees stirring up to get fresh feed? I think that bees do this habitually, by spells, and the rise of temperature would induce all to partake at the same time."

H. R. BOARDMAN remarks thus: "The change in temperature was a sufficient explanation of the disturbance described—being neither the heat nor the cold, but the sudden change of temperature which invariably produces such disturbance, and in proportion to the violence of such change, whether rising or falling temperature."

J. E. POND, JR., replies as follows: "I do not think that the explanation given could be diagnosed as bee-diarrhoea. It is true that bee-diarrhoea is accompanied by such a roaring as is described, but there are other causes that might produce the same. My opinion is that the bees were hibernating during the severe cold weather, and the sudden change of 20° in warmth, awakened them, and the roaring was caused by those efforts which they always make at such times, to restore the equilibrium of heat within the hive; another reason for so thinking is, that if affected with bee-diarrhoea, they would have given further manifestations of being so troubled."

Bee-Houses and Cellars.

Query, No. 3.—How should they be built? How ventilated? What is the right temperature? When should the bees be taken out?

JAMES HEDDON says: "Observation and experiment have forced me to believe that no kind of a cellar with any sort of ventilation, quantity of food, or degree of temperature can be depended upon to prevent bee-diarrhea where its primary cause is present. Just how special repositories should be built and operated, cannot well be learned until we first know the cause and prevention of the disease which is at the bottom of all our winter losses. I think that the future will prove that such ventilation, temperature and humidity as that in which the bees remain the most quiet, is the best; and that will vary a little in different localities and seasons. Bees should be removed from cellars or bee-houses after all danger of any long confinement is past, or when the first new pollen appears."

DR. C. C. MILLER responds as follows: "I use the cellar under my house, and I also built a bee-cellar about a year ago, making it the same as an ordinary cellar. Bee-houses or bee-cellars should be ventilated by a sub-earth ventilation pipe for ingress of air, and a chimney or pipe at the top for an exit for the air. A stove containing a slow fire hastens ventilation when the weather is cold enough. When outside air is as warm or warmer than the air in the cellar, leave the doors and windows open at night."

"The right temperature is that at which bees remain the quietest, and I do not believe that it is, by any means, the same in all cases, but must be determined in each case by experiment. In my main cellar the bees seem to be the quietest when the temperature is about 40° above zero. I usually remove my bees when the soft maples bloom."

DR. G. L. TINKER says: "Bee-houses should be built double-walled, the roof as well as the sides, and the spaces filled in with sawdust. Six inches of sawdust is enough for this locality, but farther north not less than one foot may be required. Large cellars are better to winter bees in than small ones. In my opinion bee-houses may be ventilated best by two air-shafts in opposite ends of the building, extending from the floor upward through the roof. Where many bees are to be wintered in a cellar, it may be ventilated in the same way. I think that that degree at which the bees keep the most quiet—from 40° to 50° Fahr.—is the best. Try them with a thermometer, and then keep them as near the degree as possible. Take them out of the cellar early, or as early as March 1, in this latitude, and as early as Feb. 15, if the winter is a mild one. As breeding will then begin, if they

have pollen, stop all upward ventilation and contract the entrances well. But if they are wintered so far north that flights do not occur often as late as March 1, they should not be put out until frequent flights are assured."

G. M. DOOLITTLE answers thus: "It matters little how bee-houses and bee-cellars are built, providing they accomplish the purpose for which they are intended, i. e., keeping a uniform temperature inside, no matter what are the changes outside. Because a cave in the earth will better accomplish this than a bee-house or a bee-cellar under a dwelling, is why I prefer the cave. I sometimes think that the matter of ventilation is non-important, as bees frequently winter in splendid condition with no special provision being made for any ventilation; but by way of explanation, I will say that I use sub-earth ventilation of 150 feet in length, in connection with a direct upward ventilation of the same size. These ventilators allow of being opened or closed at pleasure, and when I say that they are closed nearly one-half of the time, it will be seen that I do not value ventilation as highly as some do. I endeavor to keep the temperature at from 43° to 45° above zero."

"Bees should be taken out at about the time when the first pollen appears; yet it sometimes occurs that they would be better off if left in the cellar until the willows and hard maples bloom."

PROF. A. J. COOK says that "Bee-houses and bee-cellars should be constructed so as to be independent of outer temperature. If built above ground, the walls should be thick. Any under-ground cellar with a flowing spring of water, and containing a basin holding a barrel which receives and gives out the water continually, is excellent."

"I would always ventilate them with an under-ground pipe 500 feet long; and I should like a pipe also connecting with fire above, so as to produce a current of air. A pipe connected with a chimney will do, however, with no fire. We have such a cellar which has been in use for years, and in it we have never lost a colony. We have been very successful with a temperature of from 38° to 42° above zero. This winter I am trying a higher temperature. The temperature in the cellar is now 48°, and I fear the result."

"I would not take bees out until they can gather pollen. Here it is about April 10."

W. Z. HUTCHINSON responds as follows: "The walls of bee-houses or bee-cellars should be thick, and made of some non-conducting material. If partially under ground, the temperature can be kept more even. They should be so arranged that the outside air can be admitted

directly or through tile laid under ground. There should be a ventilator at the top. That degree of temperature at which the bees are the most quiet, is the best. If the bees are quiet, and show no signs of bee-diarrhea, they need not be taken out until pollen can be gathered."

MESSRS. DADANT & SON reply thus: "We have never built a bee-house, but our bee-cellars are deep enough in the ground to be beyond the reach of frost. It is important that they should be dry. We ventilate them by means of windows with blinds. Should blinds be missing, a bunch of straw will do very well to keep the light out and to let the air in. We think that the temperature should be about 42° or 45° above zero. If the bees are not quiet, they are either too cold or too warm. We put them in on the first cold days of December, and take them out on the first warm days of March; but much depends on the location and condition of the bees. If they are quiet, they may be left in longer."

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a demand that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts.; per doz., 40 cts.; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

The long winter evenings will be well occupied by reading bee literature. When renewing your subscription, it will be well to get some good bee-books. See our list of books on the second page and select what you need.

Every subscriber is kindly invited to obtain a new subscriber to send with his renewal. Please notice the premiums offered for clubs, on another page.

CORRESPONDENCE

For the American Bee Journal.

Introducing Unfertile Queens.

S. SIMMINS (75-100).

It is seldom necessary to give virgin queens to full colonies, but where queen-rearing is carried on, there are often many on hand, and so must be given to nuclei, either made up purposely to receive them, or those queenless, already established. Much has been said in reference to different plans recommended, but no satisfactory method seems to have been adopted. The plan which I now offer, I believe will meet the wants of all, who, like myself, rear a large number of queens yearly.

Towards evening select as many queenless nuclei as there are young queens on hand, close up each, but allow ample ventilation; then drum on the sides for a few seconds, and permit the queen to run in through a slit previously made in the perforated material, close it at once that no bees may come out, and give them their liberty on the next morning. By first being frightened, and then finding themselves confined, the bees lose their first inclination to attack the restless young queen. As soon as the first fright is over, the quilting should be partially re-arranged to guard against chill during the night, but do not remove the perforated zinc which should cover the entire upper surface. The entrance should be arranged to close or open, without extra fixing.

I would not introduce a queen of any kind to a full colony by this means, but where it is necessary to give a virgin queen to such, it will be at a time when the colony has recently swarmed, and little risk is incurred by permitting her to run down from the top of the frames by first driving the bees back with a little smoke.

I trust that others will try the plan and report thereon during next season. It occurred to my mind, because on very many occasions, when sending queens away with bees in $\frac{1}{2}$ -pound lots, I have had to take the bees from a full colony, and the queen from a nucleus. The queen was put in last, and the shipping-box immediately closed, and remarkable as it may seem, not one report of death has been received.

Nuclei can be made up from full colonies, at the same time it is desired to accommodate newly hatched queens, when confined over night in this way; but they must be carried some distance away, and if not removed from the same yard, the bees should be made to note their new location; because every bee which returns to what a few hours since was its own home, will be slaughtered. They will not be accepted by their own comrades after being confined under excitement, even should they

have been away only five minutes; hence the caution I have elsewhere given in regard to fertile queens with attendants after being confined on a journey.

This process of introducing queens by fear is quite different from that of inserting fertile queens in full colonies; but the case is exceptional, because of the restless character of the virgin queen whose bearing attracts the attention of the bees, even if she does not first attack them, which frequently has been the case.

Brighton, England.

For the American Bee Journal.

Chilled Bees are Not "Hibernating."

WM. F. CLARKE.

On page 779 of the BEE JOURNAL for 1884, Mr. Wm. Malone discusses the question, "Do bees hibernate?" and which he answers in the negative, basing his reply on the case of a prairie grey-squirrel which he found several winters ago, and which he considers "a perfect example of hibernation." He concludes that bees do not hibernate because their torpor is not so profound as that of the squirrel which he discovered. But the condition is one that admits of degrees. Bees may not become so utterly quiescent as did the squirrel, and yet hibernate to a certain extent. Mr. Gallup, Mr. L. C. Root, Mr. Allen Pringle, and others, testify that bees relapse into a dormant state, out of which they are "slowly aroused;" even Mr. Heddson uses the phrases, "perfect quietude," and "semi-hibernation." The scientific term denotes a state of winter torpor, whether partial or complete.

Hibernation is not the result of exposure. "Chilled bees" are not "hibernating bees," but bees undergoing the process of being frozen to death. In the early stages of this process they may be restored by warmth, but unless thus restored, they will die. They are not on the road to death when they hibernate. It is nature's expedient for preserving them alive. Mr. Malone confounds two states that are perfectly distinct and opposite the one to the other. Kirby and Spence, in their Entomology, rather poetically speak of spring as "the period when insects shake off the four or five months' sleep which has sweetly banished winter from their calendar." They also argue at length that something more than cold leads insects to retire into their *hybernacula*; and that something more than warmth leads to their re-appearance in spring. That something more is *instinct*. "Chilled bees," as Mr. Malone tells us, invariably show signs of diarrhea when revived by warmth, but it is one of the evidences of hibernation, that they have, as the result of going into that condition, escaped the dread disease.

Mr. S. J. Youngman has my thanks for his frankness in saying, "I think Mr. Clarke's theory has but few friends." He is evidently sorry for me and my theory. Do not fret about

us, Mr. Youngman. If the theory be true, it will soon have hosts of friends; if it be false, it will die without any to lament it, for even I shall decline to be a mourner at its funeral.

Speedside, Ont.

For the American Bee Journal.

Season of 1884—Selling Honey.

A. D. STOCKING (65-80).

Owing to the state of my health, I have deferred making my report for the past season longer than I intended to. I commenced the season with 65 colonies, all in fair condition, having wintered them on the summer stands with chaff cushions over the frames, which was all the protection they had. I lost only 3 by starvation, but several by robbing.

Fruit bloom was abundant, and they got a good supply of honey and built up strong by the time white clover blossomed, but the weather was so cold and wet that they secured but little honey; but before basswood came on, the hickory trees were covered with honey-dew, and the bees soon filled the sections, which destroyed my white honey. This honey was dark and thick, but had no very disagreeable flavor, and I had no trouble in selling it at a reduced price. Basswood bloom lasted only three or four days, but did not yield very abundantly, and the fall was so dry, with very cold nights, that I obtained but little fall honey.

It was a very poor season with me. I got only about 30 pounds of honey per colony, spring count, the most of it being comb honey; but the bees filled the brood-chambers full, and they were put into winter quarters heavy with honey and strong in bees. I had but few swarms, and now I have 80 colonies on the summer stands.

I have sold all my honey for the last three years in my home market, and have not yet been able to supply the demand. I have worked hard to create a home market, and have been successful. I set my own price on my honey, and would not allow it to be sold at any less than the price I put upon it, whilst others brought in honey and sold at lower prices than I did. I was the first one to introduce the 1 and 2-pound sections into this market, and I have taken great pains to put up my honey in sections in a clean and attractive shape. I had some trouble in introducing extracted honey, but I succeeded, and now I cannot begin to supply the demand, whilst there is a good deal of extracted honey in the stores with no sales. I sell a great deal of honey to farmers who come to my apiary for it.

I believe if all honey-producers would go to work and create a home market amongst their farmer neighbors, and in their near country towns; establish a high standard for their reputation for honey of the first quality; produce that honey in an attractive shape, and be careful to keep it there, there would not be so much complaining about the low prices,

dull markets, and over-production. The best medium that I have found for advertising has been our County Fair. I took great pains to make a large and attractive display, and was on hand all the time to talk it up and explain it to the people, and I sold all I had there, and could have sold much more.

Ligonier, 6 Ind., Dec. 30, 1884.

For the American Bee Journal.

New Registering-Blocks.

A. A. FRADENBURG.

Having several times seen, in some of the bee-papers, mention of some sort of plan for registering colonies in an apiary so as to tell at a glance in what condition the colony was at the last examination, I have invented the following device which I think will be found to be cheap and useful. From a 2-inch plank saw off a strip 2 inches wide, plane the four sides, and then make it octagonal, or eight sided, by planing down the four corners. Now paint one face, or side of it, with a bright paint, say a red color, the next face paint a paler red, and the next, say a very pale red; then paint the next face a bright yellow, the next a medium yellow, and the next a pale yellow; and for the other two faces, paint one white and the other black.

When the paint is dry, saw the stick up into blocks about three-quarters of an inch long, or perhaps one-half inch is just as well; then punch or bore a small hole through the center of each block. Now cut off pieces of wire 3 inches long and of a size to fit the holes snugly, and drive one of these wires in at or near the top of each hive so that it will project 2 inches.

Now, suppose we wish to register the condition of the bees in a hive: Put one of these blocks on the wire, and if the colony is strong, turn up the bright red side of the block; if it is only medium strong, turn up the next paler side, and if it is weak, turn up the palest side. Now place another block on the same wire and suppose the yellow color to denote stores, and if the colony has plenty, turn the bright yellow side up; if medium, the next brighter; and if light, the palest color is turned up.

It can now be seen that with two blocks, any two of 16 different conditions of a colony can be indicated at one time, and by adding one more block, any 3 of 24 conditions may be indicated. If the colony is all right, turn the white side up; if queenless, the black side; but, as a general rule, I think that two blocks is all that will be needed, and these can be used just as well on queen-rearing colonies as any other.

If dates are desired, make blocks with 10 sides instead of 8, paint them all white and then paint black figures from 1 to 9 and the 0, one on each face; then by using two of these blocks, any date of the month can readily be given. Another great advantage of this plan is that the colors

can be seen from quite a distance in any direction. It is probably the most quickly manipulated device of any yet used; and if the blocks fit the wire rightly, they will not easily be changed by accident.

Port Washington, O. Ohio.

For the American Bee Journal.

Southeastern Michigan Convention.

The Southeastern Michigan Bee-Keepers' Association met in Plymouth Church, at Adrian, Mich., on Dec. 3, 1884. The meeting was called to order at 11 a. m. by President Gilbert. When the roll was called only a few members were present. The Secretary's and Treasurer's reports were read and accepted.

Mr. D. G. Edmiston reported, as one of the committee which was appointed to confer with the County Agricultural Society in regard to the exhibits at the Fair, and a revision and enlargement of the premium list in the apianian department, that the society were unable to tell until a late date whether they would be able to hold a Fair or not, and then in their hurry they forgot to make any change in the premium list, so the matter stood unchanged.

Mr. C. J. F. Howes reported as chairman of the committee on foul brood, that a petition had been drawn up and signed by the members of the committee, which requested the Probate Judge to appoint a commissioner of foul brood for Lenawee county, according to the foul brood law of Michigan. The petition was presented to the Judge by the Secretary of this Association, and a commissioner was appointed, but nothing further was done in regard to the matter, as a member afterwards stated that bee-keepers did not like to report their neighbors. The convention then adjourned until 1 p. m.

The convention was called to order at 1:30 p. m. by the President, and 14 members paid their annual dues. The election of officers then took place with the following result: President, C. J. F. Howes, of Adrian; Vice-Presidents, one for each county represented, are as follows: Washtenaw County, Dr. C. F. Ashley, Ypsilanti; Jackson, Joseph Butler, Jr., Jackson; Livingston, F. L. Wright, Plainfield; Hillsdale, G. H. Denman, Pittsford; Oakland, Mr. Boydem; Le-wanee, Robert Forsyth, Blissfield; Wayne, M. H. Hunt, Bell Branch; Monroe, H. Scranton, Dundee; Secretary, A. M. Gander, Adrian; Treasurer, D. G. Edmiston, Adrian.

Mr. B. Bailey asked why a colony sometimes loses its queen and has no means of rearing another.

Dr. Sam'l Stevenson said that there were various ways in which a colony might become queenless, one being that at the time of the mating of the young queen (which was to take the place of the old one that left the hive with a swarm), it might be lost while taking its flight, or caught by a bird, or entering the wrong hive on its return, and numerous other ways by which it might be destroyed. At such times the apiarist should be on the alert to supply another queen, for by this time there is no means left them for the rearing of another, and should the colony be left to itself, they would soon become a prey to the moth larvae, and the inexperienced bee-keeper would say that the moths destroyed his bees, which might have been saved by a little timely attention.

"Why does the honey ooze out of the comb after it is put into a honey-room?" It was generally thought that it was not thoroughly ripened by the bees before capping. Dr. Stevenson said that the bees

put the caps on at the right time, but they did not make any calculations on the bee-keepers removing it, thereby preventing that thorough evaporation which it would receive if left on the hive. He also stated that it was the honey gathered early, or the white honey which oozed out, or sweat as some call it. He had never seen it in goldenrod or fall honey.

Mr. Gilbert said that the honey was not ripened before capping, and that combs built during one season and given to the bees the next, would be filled and sealed too soon. He had seen honey in the centre of the hive sweat or run out in the same way, and the bees removed it to other parts of the hive. Mr. Edmiston attributed it to dampness, while W. S. G. Mason attributed it to its being taken off too soon.

Mr. Howes said that when the bees brought in the nectar it was at times very thin, and when the flow was good, the bees needed a large comb-surface to store it in while it was being evaporated; and that the bees would keep up a vigorous fanning and make a roaring noise nearly all night long after a big day's work, the roaring ceasing towards morning, as the evaporation was completed; that the humming or roaring noise corresponded to the amount of evaporation to be done, and that the bees might, when short of room, seal up some of this partly ripened honey. When taken off, it would soon begin to run down over the cappings of the rest, thus making a soiled and unsightly mess of the whole.

Dr. Stevenson said that he did not think that the humming or roaring noise was any indication that evaporation was going on. He had heard bees make the same noise early in the season when there was no honey coming in, while the bees were lying out in large clusters and fanning vigorously inside.

Mr. Howes asked, "Who should keep bees?" He also thought that this locality was overstocked.

Dr. Stevenson said that to make a success of bee-keeping, the bee-keeper should be ready and willing to attend to the needs of the bees at the right time, and to be very careful of the small circumstances which go to make up the sum total of bee-keeping. To overstock a locality he thought almost impossible when there was a good flow of nectar; and at other times when there was no honey for the bees to gather, a very few colonies in a place would be too many.

Mr. Gilbert said that where but a few colonies of bees more were kept in a place there would be no trouble with overstocking; but where 100 or 150 colonies were kept with others near by, that there might be such a thing as overstocking.

At this stage the convention was favored with a song by Miss Osborne, entitled, "Charley, the Bees are Swarming."

"What is the best method of introducing new queens?"

Mr. Gilbert said that he would not introduce a new queen until the colony had become hopelessly queenless; that he could not get it to accept a queen until it had missed the old queen and began to rear queen-cells.

Mr. Edmiston said that he introduced a queen right away by caging the old queen, then in a little while change the queen, putting the one which he wished to introduce in the cage in place of the old one, and leaving her caged for a time, when the bees never know that they are without a queen. Another way was by changing frames, bees and all, where he wished to change queens from one hive to another.

The next subject discussed was honey-dew.

Dr. Stevenson said that it occurred in his locality (Morenci, Mich., 30 miles west of Toledo, Ohio) in August, and again late in the season.

Mr. Howes wished to know whether it would be safe for winter stores. The Doctor replied that his bees had for winter stores what they stored of it in the body of the hive, and that he was waiting anxiously for the result.

Mr. Edmiston said that he understood by Prof. Cook's writings that there are two kinds of honey-dew, some which is obtained from aphide, which is good for winter stores, and that obtained from the bark-louse, which is some different, varying in color and taste, and he was doubtful whether it would do for winter stores, but he would not be afraid to risk it. As to the bark-louse, Prof. Cook thought that they would not trouble long, as they would soon be destroyed by their enemies.

Mr. Overmyer said that it would be almost certain destruction to the bees if it were undertaken to winter them on this honey-dew. Last year his bees gathered some of it and had it for their winter stores; and the result was that in one apiary he lost 154 colonies out of 159, and in another, 89 out of 117. His bees gathered large quantities of it during the past season. It occurred in his locality in mid-summer, and again later in the season. The best use that he could find for it was to feed it to the bees and keep them bred up strong. He had done so with his bees, and they were in fine condition.

Mr. Howes asked how we were to prevent its being mixed with nice, white honey, as some writers call it "abominable stuff," and not fit for hogs to eat.

Mr. Overmyer said that the "stuff" should be extracted, and the bees fed with good syrup for winter, to insure their safety.

Foul brood was the next subject discussed. Dr. Stevenson asked whether the disease really was so prevalent as generally supposed to be.

Mr. Edmiston then gave a description of the treatment which he employed in ridding his apiary of the disease several years ago, stating the necessity of being very careful while handling a diseased colony, and to thoroughly disinfect everything used about it, by boiling thoroughly, using salicylic acid to disinfect the hands, smoker, etc., and also using the acid in the food which is fed the bees just after changing them into a clean hive with frames of foundation. He also thought that not more than one person in fifty would succeed in curing the disease at the first trial, and some would never cure it.

It was decided to hold the next annual meeting at Adrian, Mich., on the last Wednesday in November, 1885.

Sixteen of those present represented 785 colonies, spring count, and 1,280, fall count, and obtained 307 pounds of beeswax, 10,056 pounds of comb honey, and 17,159 pounds of extracted, being an average of 34 2-3 pounds per colony. The price received for comb honey was 15 cents per pound, and for extracted, 11 1/4 cents per pound.

The annual dues received not being sufficient to pay expenses, it was decided to change the membership fee from 25 cents to 50 cents. The convention then adjourned to meet as above stated, unless the executive committee should decide to hold a spring meeting.

A. M. GANDER, Sec.

F. W. GILBERT, Pres.

The seventh annual meeting of the Nebraska State Bee-Keepers' Association will be held at Tecumseh, Neb., on Wednesday, Thursday and Friday, Jan. 14, 15 and 16, 1885; the first session beginning at 3 p. m. on the 14th. Notices will be posted in the Tecumseh depots, stating the hall in which the meeting will be held.

M. L. TRESTER, Sec.

For the American Bee Journal.

Hibernation, Bee-Diarrhea, etc.

C. W. DAYTON.

Although I consider hibernation, as portrayed by Mr. W. F. Clarke, to be a grand feature in the successful wintering of bees, yet I am unprepared to believe that hibernation alone will lessen the number of our winter losses, as I believe that hibernation will prolong the lives of bees only so long as they remain healthy, and that the ill-health of a colony of bees may be brought about by conditions which are greatly favored by the hibernating condition.

From the gradual appearance of moisture where a uniform temperature is maintained, one might be led to infer that the moisture commenced to condense in the cooler portions of the hive as soon as the bees began to hibernate; sometimes being so slow in its action as to require weeks, if not months, to become readily visible to the naked eye, but at length covering the combs with water within 2 or 3 inches of the cluster of strong colonies. The cause might be attributed to the decreasing heat of the cluster, or too large a brood-chamber.

It is my idea that we have temperature in winter sufficient, and that it is only a question of its continuance as to when we may have nearly a hive full of frost, let the hive be occupied by a pollen or a sugar fed colony. As 9 colonies out of ten having their combs well filled with stores cluster on the lower parts of the combs, yet, in time, frost or water will occupy the combs at the side, if not directly above the cluster, and during a warm spell of weather, when the bees awake for regalement, there will be a job of house cleaning, which will manifest itself in bee-diarrhea, should the weather not be favorable for flight. Such conditions are brought about on the same principle that a chimney may become nearly filled with frost during a spell of low temperature in winter, and when it is warmer the frost melts. Again, a colony may hibernate for a couple of months and the combs may become cold, except in close proximity to the cluster, and without a change of temperature the bees may be awakened by disturbance or hunger, meanwhile sending draughts of warm air amongst the combs, which will immediately cover them with moisture.

When bees having diarrhea are supplied with pure stores, we do not find them evacuating those worm-like masses described by Mr. W. M. Woodward on page 622 of the BEE JOURNAL for 1884, but it is a liquid containing about the same amount of solid matter that composes the excreta of healthy bees. While bees may die from the effects of over-loading the intestines with healthy excreta, which is produced by the consumption of food composed largely of refuse substances, colonies thus afflicted do not emit a diarrhetic odor, nor present to the hand, when held above them, the cold and clammy

sensation described by Mr. A. R. Kohnke on page 324 of the BEE JOURNAL for 1884.

The belief that the intestines of a bee cannot become loaded without disease, and that that disease is diarrhea, will not accord with nature, and must be the result of too hasty conclusions. Hence, it requires experience in order to distinguish the disease. An illustration of this may be found on page 651 of the BEE JOURNAL for 1884, where bees were confined at a time when there is more excrementitious matter produced in two days than during four months' confinement after the active labors of the season are ended. While the general conditions described possess nothing pertaining to diarrhetic disorder, the condition of the artificially confined colony being assisted by indigestion, as caused by excitement, furnishes an imperfect specimen of a diarrhetically affected colony, and the effect would have been of a similar character had pollen been excluded.

The condensation of moisture and the accumulation of fecal matter are plain and fixed philosophical facts; but why cane sugar is more of a safeguard against moisture-drinking than honey and pollen; is, I believe, not so well understood. Possibly the result of an experiment, which I tried last fall, may throw some light on that point:

From a normal colony without brood in an observatory hive, the sides of which were darkened by hinged doors, I removed all the combs but four; next I satisfied myself that the four combs contained no honey or pollen, and as it was after all of the flowers had been killed by frosts, it is probable that there was none gathered. Then I fed them 5 pounds of thick sugar syrup, and substituted for a cover to the hive a board having a weather-check clear through it, and coming directly over the centre combs. After a few pleasant days we had a week or so of cloudy and rainy weather, and as it rained there was a continual dropping from the cover upon the bees, which, as could be seen through the glass, were clinging to the combs, turning black and perfectly quiet, and appearing much as they do when hanging on the outside of the hive during a shower in the swarming season. When they flew, a few days afterward, there was no visible distention or disease.

At the time of the flight I inserted between the two middle combs, a comb containing a small patch of capped brood, but no pollen or honey. When it rained again, the bees remained quiet at first, but afterward became greatly aggravated and inclined to sting. When they flew, two days afterward, they appeared as though loaded with honey, the evacuations were copious, and with but few exceptions, nearly transparent, and there was the characteristic odor of prevalent diarrhea. The last part of the experiment was repeated once and the first part twice with the same results. An untried experiment should differ from this in the substitution of pollen for brood, and as bees

have so much more energy in the spring to arrange the hive preparatory to brood-rearing. I believe spring to be the time for the trial of such experiments. That pollen may be so substituted hardly admits of a doubt. Bradford, *♂* Iowa, Jan. 5, 1885.

For the American Bee Journal.

Is Dodder a Pernicious Parasite?

W. A. PRYAL.

On page 795 of the BEE JOURNAL for 1884, I notice that a correspondent from Ontario thinks that I did not give sufficient warning as to the destructiveness of the dodder which I communicated to the BEE JOURNAL on page 755. In my very first sentence I stated that there are many varieties of the "plant" (it is not really a plant) scattered over the world. I was not describing the wheat nor the flax dodder of England, but the alfalfa dodder which possibly may also be the lucern dodder. I understand that alfalfa and lucern are nearly, if not identically, one and the same thing, and in my closing paragraph, on page 755, I stated that it will never "be cultivated as a honey-producing plant, on account of its destructiveness to alfalfa."

Again, the "plant" will not grow unless it has the alfalfa to support it. No other plant furnishes, as far as my knowledge of it extends, the required nutriment for its maintenance. Out here, near San Francisco, we have miles of a most beautiful dodder growing on a marsh weed, which grows on the shores of the San Francisco Bay, and which "plant" is admired by overland passengers who come to this State during the fall months. Now, why has not some one "sounded notes of warning" concerning the danger which it might cause? Simply because its nature was such that it was compelled to keep near the salt shores.

In Canada, the home of Mr. M., they have several native species of this "plant," one of which I understand lovingly embraces that much-talked-of and poetical honey-plant, the goldenrod. The flowers of this species of this parasitical plant is of a greenish white, and whether it secretes nectar as does the alfalfa dodder, I am not prepared to say; but, perhaps our friend can, if he lives near the back lakes where the species to which I refer is to be found.

Our alfalfa dodder is a favorite with the bees, and exists on a honey-producing plant; the Canada goldenrod dodder exists likewise, but as to its honey-producing virtues, I know not; so for this reason it would be interesting, and advisable too, for those who have made any observations in this regard, to communicate them.

This question I should like to have answered: "Do all dodders (*cuscuta*) which grow on honey-producing plants yield honey?" Referring back to the Canadian and the alfalfa pest: The last named is the death of the plant upon which it preys; but not so

with the former one; for, as I learn, the supporting plant does not suffer in the least from the close embrace of its dependent.

I must state that I am glad that Mr. Mitchell again called up this subject, not that I think I did not sound a sufficient "note of warning," which I acknowledge is a good and proper thing to do in cases of danger, but as there are many species of dodder in America which exists on useless weeds and plants, and which may be valuable honey-plants, and being unlike our alfalfa pest, harmless to our valuable crops, may be allowed to grow with perfect impunity for the benefit of the bees. Now, who is prepared to shed further light upon this subject? I shall be pleased to learn more about this class of "plants." However, let me be understood to say that no matter how harmless the plant may be to some plants, I strongly admonish all to give it, as far as cultivating it is concerned, the cold shoulder.

Do not write me for seed of any of the plants which I may describe in the BEE JOURNAL, as I am not in the seed-growing business.

Since the above was written, I have found a communication in the *Pacific Rural Press*, written, I believe, by a member of the Agricultural College of Colorado, for the *Denver Farmer*. It really seems that there are several species of dodder that prey upon alfalfa. I quote as follows: "The plant sent for identification I recognize as *cuscuta chlorocarpa*, and this particular species has been abundantly introduced into the various parts of the State in alfalfa seed during the past season. Besides the species just mentioned, there is another one, *cuscuta glomerata*, growing on the alfalfa on the College farm, with pale, brownish stems, and rather pretty, pure white flowers. It was very likely introduced in the first sowing of alfalfa on this farm. Although many of the species are quite beautiful in their various shades of golden yellow, yet it is nevertheless a most pernicious weed, which has done much damage to the flax and clover fields of this country and Europe, and to the alfalfa fields of California."

To quote further from the lengthy article is unnecessary. The main fact to be established is, "Is the dodder a pernicious parasite?" This is now, I think, to be fully established beyond a doubt; so we will all abide by the verdict.

North Temescal, *•* Calif.

For the American Bee Journal.

Haldimand, Ont., Convention.

The Haldimand Bee-Keepers' Association met at Canfield, Ont., on Dec. 12, 1884. The minutes of the previous meeting were read and approved.

Mr. Kindree said that he was using two kinds of hives; he liked a chaff hive with a half story on top. He uses frames 11x13 inches, and prefers a deep frame, as it keeps the bees further from the cold. He is very successful in wintering bees.

Mr. Smith advocated the use of a deep frame. He had used the tenement hive,

but had discarded it, and he is about as successful as any one.

G. B. Jones advocated a double-story, shallow-frame hive.

The Secretary prefers a deep-frame hive, believing it to be easier to handle than a wide, shallow-frame, and better for winter. It was the opinion of the convention that the two-story hive is the best for all purposes, and there was a decided preference for deep frames.

Mr. Kindree believed that it was a great advantage to use foundation; for more honey could be produced by its use.

Mr. Holterman thought that it was a disadvantage at some times; but if extracting was properly attended to, the use of foundation is a decided advantage.

G. B. Jones was in favor of the use of foundation, care being taken that the bees do not fill the cells with honey to the exclusion of the queen.

The Secretary was in favor of the use of foundation, and thinks that its use is very beneficial. He recommended dipping the foundation in warm water where it was found too hard for the bees to draw out.

Mr. Jones preferred natural swarming, and said that a natural swarm works with more energy than one made by division.

Mr. Holterman had tried both dividing and natural swarming, but preferred dividing.

Mr. Kindree had tried both ways, and preferred natural swarming; but if he had a young queen to spare he would prefer dividing.

Mr. Smith thought it hard to prevent increase.

Mr. Kindree allowed his bees to swarm once, cut out extra queen-cells, and gave the bees plenty of room.

Mr. Holterman thought that plenty of shade in hot weather would prevent swarming.

Mr. Jones advocated giving plenty of room and shade. Those colonies in the shade were the latest to swarm, and gave the largest swarms.

Messrs. Kindree, Holterman, Smith and Jones described their methods of managing bees, which were in accordance with the plans recommended by leading authorities on apiculture.

The next meeting will be held at Cayuga on Friday, Feb. 13, 1885, at 10 a. m., for the election of officers and other business. A vote of thanks was tendered the officers of the Grange for the use of their Hall.

E. C. CAMPBELL, Sec.

For the American Bee Journal.

Wintering Bees—Hibernation, etc.

5—WM. MALONE (23—38).

In the winter of 1882-83 I prepared a colony of bees with which to experiment. This colony was in a 10-frame Langstroth hive on 8 combs spaced so as to correspond with the hive, and the hive was only one story high, and had two thicknesses of coffee-sacking fitted tightly over the frames, and a loose cover on the hive. The colony clustered in the centre of the hive, and was about as large as a wooden pail. On Jan. 1, 1883, the mercury went down to zero, and remained near that point for six weeks, during which time I raised the cover 3 inches above the hive, and nearly every day in the week, during that time, I examined those bees by rolling back the coffee-sacking, but did not disturb them in any other way. The bees on the outside of the cluster soon began to hibernate, while

those in the centre were lively and ready to fly or sting every time I rolled back the cover. The bees on the outside of the cluster soon died, while those on the inside were always lively. About the middle of February we had three days of warm weather, and the bees showed signs of bee-diarrhea, and carried out the dead bees. Now, did those bees which wintered on the inside of the cluster have the diarrhea, or was it only those which were partly chilled which had it?

During the summer of 1870 a patent-hive vender visited this neighborhood. His hive had 8 frames about 10x14 inches, with a moth-trap at the bottom, and a honey-board with two 8-pound boxes for surplus honey over the brood-nest, with holes to correspond in both honey-boxes and honey-board.

The vender's instructions were to close the holes with a tin slide furnished over the bees, when preparing them for winter. Three of my neighbors and myself bought some of these hives and transferred our bees into them. We closed the holes in the honey-board as directed, and the result was that all the bees died. The bees which were in box-hives and log gums, by the side of the patent hive, lived and did well. What was the cause of this? The box hives had no ventilation at the top, but had plenty at the bottom; the patent hive had a double door at the bottom, but a full-sized entrance. By accident one of my neighbors left the holes open in the honey-board, and his bees in that hive wintered all right. From that we all took the hint and have had no more trouble; but we had tried those hives two winters before we discovered the difficulty.

On page 809 of the BEE JOURNAL for 1884, is an article containing advice to beginners. It advises to smoke bees at the entrance of the hive; but let me say, never smoke the bees at the entrance unless you want them to stop work for 10 or 15 minutes. If the bees are gathering honey and the sun is shining, it will not be necessary to smoke them, otherwise you may have to employ a little smoke. I would never wish to manipulate the hive at its rear end, but always at its side with my right hand next to the entrance. Never let the bees know that you are near them until you are rolling back the cloth which covers the frames; uncover one-half of the frames at a time, and if a bee alights on your nose or hand, do not strike at it, for if you do you will get stung; but if you pay no attention to it, nine times out of ten it will not sting. At least that has been my experience with Cyprians. The figure 5 before my name, at the beginning of this article, indicates the number of years I have been engaged in the bee-business; if others choose to follow the suggestion, we will all understand it. Oakley, ♀ Iowa, Dec. 29, 1884.

Do not forget to send for a Binder in which to file your JOURNAL, and thus have the full benefit of it during the whole year.

For the American Bee Journal.

The Secretion of Honey.

F. A. HUNTLEY.

In every honey-producing plant there is, each year, a variation in the amount of honey secreted. Sometimes a plant furnishes honey in fairly paying quantities during alternate years; and again, there will be several years during which there is a scarcity or a liberal supply. The same species of plants in different regions seldom afford a like supply of honey from year to year. In many parts of New York our common white clover is the chief among honey-producing plants; while here in central Iowa it was never known to yield a large crop. During the past four years I have anxiously watched the bees at work upon the white clover blossoms; and, though at times their industry has seemed marvelous, yet seldom have they ever secured a surplus over and above that necessary to their own immediate wants.

In this country, buckwheat is no longer what we are at liberty to call a honey-plant. Some ten years ago, in this locality we realized crops of honey in paying quantities from buckwheat; but since that time we have seldom seen a trace of buckwheat honey, even in our largest colonies. Goldenrod has always yielded honey plentifully, but it is fast disappearing as the country becomes more thickly settled, and basswood fails frequently to furnish any honey at all.

If the true cause of the occasional failure in the secretion of honey by the flowers could be ascertained, a remedy might possibly be devised to avert such frequent failures. Prof. C. E. Bessey, Botanist of the Iowa Agricultural College, suggests that perhaps the non-secretion of nectar in white clover blossoms might be due to the very rapid growth of that plant while in bloom. This reason may apply to all plants during their time of flowering. A rapid growth in the plant may cause an interruption in the secretion of nectar in the blossoms. It has been many times suggested that non-secretion of nectar is due to either too wet or too dry weather. The bee-keepers from different parts of the State, assembled at our last State Fair, seemed to be of the opinion that the honey crop of the past season in Iowa was fully two-thirds below the average.

Webster City, © Iowa.

For the American Bee Journal.

"Working Against Nature."

W. Z. HUTCHINSON (68-94).

Under the above heading, Dr. G. L. Tinker criticises the Heddon method of preventing after-swarming; as I have practiced the method for two years, perhaps I may be allowed to reply. In the two years' practice, about 60 colonies have been managed upon this plan, and only one has cast an after-swarm: there has been no robbing nor any "disease."

If the Doctor will carefully study Mr. Heddon's method, I think that he will admit that Mr. Heddon never proposed to follow the blind instincts of nature whenever his reason was superior. We find with bees as with domestic animals, that our best interests demand that we cross their instincts at certain times, and exactly accord with them at other times. Every one else, except Mr. Mitchell, has reported success with this method of preventing after-swarming, and I predict that he will in the near future.

In the third paragraph the Doctor evidently misunderstands Mr. Heddon. Mr. Heddon has not said that after-swarms were always, or as a rule, or ever, any advantage in the amounts of comb honey secured, but that the colony that cast a prime swarm came out ahead, even with the after-swarms, too. In the Heddon method of preventing after-swarming, the bees are changed from the old hive to the new while they are of the same parentage, hence it is really no "mixing" at all, nor any incentive to robbing, compared with the Doctor's proposition to unite different colonies in the fall.

I am really surprised to see the Doctor advocate the old, troublesome, uncertain plan of cutting out queen-cells, and returning the after-swarm. Queen-cells are liable to be overlooked, and more cells may be started from the last laid eggs; and besides, the time necessary to look over the combs, remove the cells and hive the swarm, is at least five times greater than with the Heddon method in which it is not even necessary to open the hives. I would, also, like to ask the Doctor if clipping queen-cells, putting back after-swarms, and uniting colonies in the fall, is any more in accordance with "nature" than the Heddon method of preventing after-swarming?

Rogersville, ♂ Mich.

For the American Bee Journal.

The Fecundation of Queens.

G. W. DEMAREE.

Mr. F. L. Wright, in the *Kansas Bee-Keeper* of Dec 15, 1884, gives one of the very few instances in which the meeting of the queen with the drone has been observed by the eye of man. Unfortunately for the deeply felt want of positive information on this subject, Mr. Wright was left to guess at the most obscure part of the hidden problem. Mr. John F. Connely, of this State, a man of keen observation, informed me some time since that he, on one occasion, saw a drone chase and overtake a queen; they grappled and fell to the ground. He hastened to the spot and saw the queen rise and fly away, and upon looking for the drone he saw his lordship deliberately crawl up on a piece of rail and soar away to chase other queens. Perhaps I have added some to Mr. Connely's statement, but at any rate the drone took wing and flew away.

In the season of 1882, my bees gathered but little surplus honey on

account of excessive rain; notwithstanding, enough came in all the time to keep up breeding, and I had leisure to experiment and observe a great deal. That summer I spent hours and days studying the habits of queens, especially as pertains to mating. I kept a number of nuclei from which queens were making their wedding trips daily; and I had virgin queens in confinement, experimenting in search of a method to mate them while in confinement.

The results of my observations were about as follows: The mating of virgin queens, on the average, takes place on the seventh day of their age; they begin to lay eggs on the ninth day, and the average number of trips they take in the open air in search of a mate is three. The average length of time of their absence when out on a successful wedding trip is 21 minutes. They never make less than 3 trips, and I have seen a few cases where they left the hive 7 or 8 times, and in one case, 16 times. These facts were drawn from observation taken at a time when drones were abundant.

A virgin queen will continue to fly in search of a male until she is 18 days old; and if she fails to mate, she will ever afterwards be a drone-layer. A few queens—perhaps 2 per cent. of them—meet the male more than once, but never seek a mate after they begin to lay. The lengthy, slender princess makes more frequent trips in the air when under the wedding-impulse than do her more portly sisters, and she generally produces the most active workers.

When a queen meets the male bee she never tears away his generative organs as we have been carelessly informed by those who get their information otherwise than in a practical way. It would require the combined strength of hundreds of queens to dislodge the male organ. The queen only bears away the frail inner lining of the organ which requires the least possible force to detach it from its place. This appendage nature seems to have provided to enable the queen to utilize a larger quantity of the spermatie fluid in the act of fecundation.

The above observations lead me to suspect that the cases related by Mr. Wright and Mr. Connely were both, in fact, failures.

Christiansburg, δ Ky.

For the American Bee Journal.

Which way should Bee-Hives front?

REV. M. MAHIN, D. D.

It is generally recommended to place hives so that they will front east, southeast or south, and stories are told of the great advantage to be derived from such a position. For summer-time, the principal supposed advantage is, that the morning sun will shine upon the entrance of the hive, and tempt the bees out to the fields in the early morning, and thus prolong the hours of labor, and correspondingly increase the product; but this advantage is only hypothet-

ical. It has no real basis of fact. Ordinarily there is nothing to be gained by the bees being out in the early morning. Sometimes there is. It depends on the habit of the flowers that they are working on. The most of our surplus is obtained from white clover, and that does not yield honey until the sun gets well up in the morning. There are other flowers that yield honey only when the air is moist and not very hot. Buckwheat belongs to this class; and when it is in bloom, the bees must be out early or they will derive little benefit from it.

But I have observed that the position of the hive has little or nothing to do with the time they begin to fly, except in cool weather when it is better for them to remain quietly at home. They find out at what time in the day sweets are to be found; and when the time comes, they will be out and at work without regard to sunshine at the entrance of the hive. A few years ago the woods $\frac{3}{4}$ of a mile south of my house was infested with myriads of beech-bark lice, and under them the leaves and grass were sticky with the so-called honey-dew. Of course this could only be appropriated when diluted with dew, and in the mornings my bees were out in force long before the sun was up. I could hear the roar of their flight before it was light enough for me to see them. As soon as the dew dried up, they ceased to fly in that direction, and, as there was but little forage except the so-called honey-dew, they were comparatively quiet for the rest of the day.

I have known my bees to go in one direction in the forenoon, and in the opposite direction in the afternoon, the pasture being different in the two directions, river bottom west, and upland east. All this proves that bees very soon learn not only where, but at what time in the day, stores are the most abundant, and the time when the sunlight shines upon the entrance of the hive has very little to do with their work.

But there are other considerations of much more importance than this. We want to consult the comfort of the bees during the hot weather of summer. It will require but a moment's consideration to perceive that this can best be secured by facing the hive squarely to the north. If sunshine on the front in the early morning is desirable, it is secured in this way, as in summer the sun rises north of east, and in the early morning the north frontage has all the advantage of the east or southeast. But it is during the noon heat that the principal advantage of this position is experienced. While working on white clover, the principal amount of nectar is brought in in the hours between 9 a. m. and 3 p. m.; and any one can perceive the disadvantage to the bees of having the hot summer sun shining down upon the alighting-board, making it so hot that a bee will be almost scorched by remaining upon it for a moment; and the comfort of having the entrance on the shady side of the hive. Any one who will

observe two hives otherwise alike, one facing north and the other south, on a hot summer day, will have ocular demonstration of the difference.

Then, if a broad board is set up against the back of the hive, or better still, if two or three boards be nailed or battened together, making a screen 3 or 4 feet square, be so placed, the comfort of the bees is secured to the largest extent. Thus placed, with proper ventilation, and plenty of room for brood and honey, and the probability of the issuing of a swarm is very small, as I have demonstrated by years of experience and observation.

I had hives in the same yard facing in all directions, and I have found those facing north to be among the most productive.

But how about the winter? If I could conveniently change the position of my hives, I would have them front north in summer and south in winter. At least twice during severe and disastrous winters I have had hives fronting in both directions, and I have found the smallest percentage of loss in those fronting to the south. I like to have the sun shine directly into the entrance of the hive in winter. The principal advantage of the southern exposure in winter is, probably, owing to the fact that the sun melts the snow and ice that would otherwise prevent the proper ventilation of the hive. If that can be secured in any other way, there will, perhaps, be no difference.

Where one has but a single row of hives, and room to move them 8 or 10 feet back and forth, they can be faced about without the least trouble. If they front to the north, and it is desired to have them front south, move them a few feet north, and so place them that the front will be towards the old position. Very little confusion among the bees will result. But with 6 or 7 rows of hives 6 to 8 feet apart, this cannot be done. As my hives stand in six rows not more than 8 feet apart, the only way to turn them would be to do it a little at a time; and that is too much trouble. So I leave them fronting to the north, and see to it that the entrances are kept well open. I used to close the entrances to not more than an inch, and I always had moldy combs in the spring; I now leave the entrances open full size, and have no moldy combs.

If my doctrine in regard to the proper direction in which to place the front of the hive for the summer is regarded by any as heresy, all I have to say is, try it and see; and I am very sure that whoever will do so will be convinced that it is the better way.

My bees had a splendid fly this week and they are in better condition than I dared to hope.

New Castle, δ Ind., Jan. 1, 1885.

At the World's Exposition, let it be understood, says Dr. Brown, that "all exhibits of colonies of bees and bee manipulations will only be during the week of the Convention. Supplies can be exhibited any time during the Exposition."

Local Convention Directory.

Time and place of Meeting.

1885.

- Jan. 14-16.—Nebraska State, at Tecumseh, Neb.
M. L. Trester, Sec.
- Jan. 14.—Central Illinois, at Bloomington, Ill.
W. B. Lawrence, Sec.
- Jan. 14, 15.—N. E. Ohio & N. W. Pa., at Erie, Pa.
C. H. Coon, Sec., New Lyme, O.
- Jan. 15.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.
- Jan. 17.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec., LeGrand, Iowa.
- Jan. 20, 21.—N. W. Illinois, at Freeport, Ill.
Jonathan Stewart, Sec.
- Jan. 21-23.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec.
- Jan. 22, 23.—Indiana State, at Indianapolis, Ind.
Frank L. Dougherty, Sec.
- Jan. 27.—Cortland Union, at Cortland, N. Y.
M. G. Darby, Sec., Homer, N. Y.
- Feb. 4.—N. E. Michigan, at Vassar, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.
- Feb. 24-26.—International, at New Orleans, La.
- May 28.—N. Mich. Picnic, near McBride, Mich.
F. A. Palmer, Sec., McBride, Mich.
- June 19.—Willamette Valley, at La Fayette, Oreg.
E. J. Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

☞ A. B. Cheney, Sparta Centre, ♀ Mich., on Jan. 6, 1885, writes:

During the season of 1884, I obtained 14,500 pounds of extracted and 3,500 pounds of comb honey. The extracted was put up in 5-pound pails, and candied solid. I have about 8,000 pounds of it left.

☞ Henry Alley, Wenham, ♂ Mass., on Jan. 3, 1885, writes:

Bees have been flying for three days past. The winter will be six weeks shorter to them than to those in cellars and bee-houses. All are wintering well.

☞ A. P. Fletcher, East Franklin, Quebec, on Dec. 30, 1884, writes:

The weather here is quite changeable. Last week the temperature ranged from 20° to 30° below zero, and now it is raining, the snow is nearly all gone, and the mud is getting deep. Yesterday the bees came out in force and spotted the snow, besides specking it pretty well over with dead bees. I winter my bees in Root and Manum chaff hives.

☞ M. A. Gill, Viola, ♀ Wis., on Jan. 4, 1885, writes:

The season has been an average one here. The spring opened up fair, and bees were in good condition, but bad weather prevented a very abundant yield of honey from the sugar-maple. It blooms usually from May 1 to May 11, and if the weather is favorable, the bees get a "boom" from it which lasts them through the season. I think that if we could have the same working force and hot nights, bees could gather as fast from hard maple as from basswood. Not having the maple yield, the bees were compelled to wait and build up on clover. The yield from this source was only moderate, but sufficient to secure some surplus, and to build the bees up strong by basswood bloom. Basswood did not blossom, however, this season, until

July 20, and it remained in blossom 11 days, 3 of which were very poor, 4 average, and 4 extra days, with hot nights and an atmosphere charged heavily with electricity. I had previously prepared and moved 25 colonies of hybrids and Italians, and they gathered 2,250 pounds of honey in that length of time. I moved them on spring wagons from the prairie to the timber, a distance of six miles, with perfect safety. I had one apiary of 70 colonies of blacks, and in the midst of basswood they did very well (for blacks). I secured 8,000 pounds of the choicest honey, and increased my apiary 1½ per cent. A neighbor bee-keeper with a small apiary of 30 colonies of hybrids, secured a surplus of 120 pounds per colony. My best colony produced 235 pounds of honey. This is no big yield, but is enough to induce me to go on. I am living in a scope of country which has a field of basswood 30 by 50 miles, and it will always exist; for much of the land is so rough that a tree could not be gotten if once it were cut down. The country is well adapted to cows, sheep and bees, as the valley produces grass and corn to perfection, and white clover is becoming plentiful. My only hobby in bee-culture is "hybrids." I will admit that it is not the most pleasant place to ride, at times, but by using plenty of forbearance and perseverance with some smoke and a little fire, I have managed to keep from being "put off" or side-tracked. My experience has been that bees bred from a pure mother, and close up to the imported stock, and crossed with the brown-German drones, are the best bees extant with which to get your bread and butter and honey.

☞ H. Clark, Palmyra, ♀ Iowa, on Jan. 1, 1885, writes:

I have been keeping bees in Warren county, Iowa, for 17 years, and so far as honey is concerned, the season of 1884 was the most peculiar one that I have ever seen. The most of my colonies were good in the spring, and the weather was generally fine, yet there was very little honey for the bees to gather. In June, I took 500 pounds of honey from 60 colonies; but I ought not to have taken that, for they stored no more surplus during the rest of the season, as basswood was a failure. During September the weather was warm, and the bees went by the thousands to the cane mills only to be drowned or crushed. I should have fed my bees and kept them at home. By the latter part of October many of my neighbors' colonies starved, and I have lost 10 up to date. The hottest day here during 1884 was July 23, when the temperature was 98° above zero, and the coldest day was Jan. 5, when the temperature was 30° below zero.

☞ I. J. Glass, Sharpsburg, ♂ Ills., on Dec. 15, 1884, writes:

My "keeping bees" is the result of an incident. A little more than one year ago a swarm of bees clustered on an alder-bush near my garden. I made a box and put them into it, when they readily accepted their new home and went to work. I had not been the possessor of them long before the idea entered my mind to purchase a few colonies and learn the art of handling them. By the following fall I had obtained, from different parties, 13 colonies, 2 of which were weak, so I put them together and placed the 13, on Nov. 1, 1883, in a very damp, muddy cellar, contrary to the teachings of many bee-men. I set them out in the spring after a confinement of 163 days, without loss, and, seemingly, in good condition. Previous to the possession of my first colony of bees, my knowledge of the busy workers was limited to the fact that they possessed stings, and in some mysterious way gathered honey from the flowers; so I procured a book on bee-keeping, and from it I have learned to handle my bees quite

successfully. Six of my colonies were in box-hives, and I transferred them without any trouble. During the last summer I increased them to 32 colonies, and I placed them in the cellar on Nov. 17, in good condition, and they have remained quiet ever since. This has been a very poor season for bees in this part of Illinois, and I only obtained about 75 pounds of surplus comb honey; yet I did not work my bees for honey, as my desire was to increase them as much as possible. I have read a great deal about "pollen," "hibernation," "bee-diarrhea," "in-door" and "out-door" wintering, and can any one blame me for being perplexed? In preparing my bees for winter, I do away with a great many "extras," and will report the result next spring.

☞ I. J. Johnson, Utica, Ontario, on Dec. 24, 1884, writes:

I send you a specimen of a plant which grows along the roadsides and its color is blue. Is it a good honey-plant? What is its name?

[It is Viper's-bugloss or blue-plant (*Echium vulgare*), belonging to the borage family, and like most of these plants, it is a good honey-producer; still it has little to recommend it, others being better for cultivation, and a great many others more attractive in appearance. In some places in Virginia it is accounted a troublesome weed.—T. J. BURRILL.]

☞ D. M. Ketcham, Arcadia, ♂ N. Y., on Jan. 2, 1884, writes:

I have used buckwheat chaff for packing my hives the past three winters, and I find that it is the best material I have ever used, and so far those colonies with chaff only on the tops of the hives, have wintered the best. It has been a poor season for flowers to secrete honey, and I cannot report more than one-third of a crop. On Dec. 30 and 31 the bees had a good flight, and cleaned out the hives.

☞ Miss Nellie E. Wright, New Salem, ♂ N. Y., on Jan. 5, 1885, writes:

My father, who has been a bee-keeper for 15 years, and who was an experienced apiarist, died on April 21, 1884. My father carried 79 colonies into the cellar in the fall of 1883; 3 of them died during the winter, but all the rest came out in the spring strong and in good condition. Father extracted the honey from 40 colonies last fall, and mother and I extracted 116 pounds of very nice beeswax; it was so nice that we received 37 cents per pound for it. As mother and I are now left alone, we have sold the bees, but it looks lonely now in the empty bee-yard.

☞ John Rey, East Saginaw, ♂ Mich., on Dec. 30, 1884, writes:

My bees have been flying for the last three days—in fact it is a January thaw in December. The bees have been busy cleaning house and carrying out dead bees, and in every way preparing themselves for another cold spell. This has been a good winter for bees, so far, and I think they will winter well the rest of the winter, for they have good honey to live on. I notice something on the entrances of my hives. I have some with the bottom-board projecting about 4 inches, and on the rest of the hives the bottom-board is cut off even with the hive, and these are the best, as there is no chance for the snow and ice to form as there is on the bottom-board which projects. In these I used to lose some bees every winter until I found out that my bees were smothered. The entrances used to be stopped up with dead bees from the inside, and the snow

and ice from the outside. I now bore about three or four $\frac{1}{2}$ -inch holes over the entrance, and cut the bottom-board off even with the hive, and leave the entrance open the whole width; and now the entrances are always clear of snow and ice, and the bees seem to push the dead bees out, for in front of every hive I can see a handful of dead bees which the bees pushed out. I use the Langstroth-Telescope hive, and I have not lost a colony of bees in them in three years. I winter my bees on the summer stands with no packing of any kind, and no upward ventilation, and when I take off the sections in the fall, I replace them with a honey-board, and the bees seal every thing up tight, and fix it up to suit themselves.

• G. M. Doolittle, Borodino, © N. Y., on Jan. 5, 1884, writes:

The weather has again been extremely cold here; with the mercury away below zero. The bees are wintering well, however.

• Allen H. Thorne, Fountain City, © Ind., on Jan. 1, 1885, writes:

I have 18 colonies of bees packed in bee-houses, the sides of which are made of dressed flooring, and the slanting roof, which is made of light weather-boards, is hung on hinges so as to be raised from the rear. The largest one holds 10 Simplicity-Langstroth hives. The hives stand about 6 inches back from the front entrance, with a slanting board extending down within one inch of the entrances of the hives, and with 8 inches of dry sawdust behind them. I have flax straw over the entrances, so as to darken the hives, and keep out the wind, and thereby keep the bees quiet in all kinds of weather. The season here has been a poor one. There was no nectar to be gathered save for a little while in the spring. I have several colonies of bees wintered on sugar syrup alone with pollen.

• D. R. Rosebrough, Casey, © Ill., on Jan. 3, 1885, writes:

My bees are wintering finely. On Dec. 30 and 31 they had a flight which they needed very badly. I have been a reader of the valuable BEE JOURNAL for a number of years, and I also have been a close observer of my bees, and I have come to the conclusion that bees often die for the want of water, especially in chaff hives in the cellar. I think that if Mr. Doolittle had given his bees water last winter, he would have had a different report to make in the spring. Let some one who has a dry cellar try it with a few colonies, and then report in the spring. Milk and honey will cure dyspepsia. I have a young man on this diet, and he wrote his parents that it was doing him more good than anything he had ever tried. He is quite wealthy, and had visited several noted Springs in Arkansas, and had also employed the best doctor in the country, but he finally began to drink milk, and continued it for three months, when I advised him to mix honey with it; he tried it, and is now attending college. He wrote his parents to send him more honey. Honey is curing him, and giving him new blood.

• Mr. and Mrs. D. Mohr, Manchester, © Iowa, on Jan. 1, 1885, write:

Having leased our farm of 160 acres five years ago (but we still live on it), we began the keeping of bees, and the following is our report for the past four years, the number of colonies being spring count: In 1881 we had 20 colonies, and produced 372 pounds of comb honey, 1,282 pounds of extracted, and sold \$112.78 worth of

honey; in 1882 we had 45 colonies, and secured 1,304 pounds of comb honey, 2,026 pounds of extracted, and sold \$294.72 worth of honey; in 1883 we had 75 colonies, and obtained 1,510 pounds of comb honey, 2,284 pounds of extracted, and sold \$338.30 worth of honey; and in 1884 we had 75 colonies, and took 1,612 pounds of comb honey, 2,503 pounds of extracted, and received \$435.85 for the honey sold. From the foregoing it will be seen that the average per colony for the four years, was 59 $\frac{1}{2}$ pounds, and that the net proceeds in cash per colony was \$5.40. No account was kept of honey given away or eaten in the family, but the above figures show the actual amount received for honey sold. We have now 100 colonies in good condition in the cellar. We make our comb foundation on a Given press, and we have never sold comb honey for less than 15 cents per pound, nor extracted for less than 10 cents per pound. The largest yield from one colony, in one season, was 217 pounds of extracted honey. About one-third of the number of colonies were run for extracted honey only.

• Jas. Jardine, Ashland, © Nebr., on Dec. 29, 1884, writes:

The fall honey-flow was very short, and I put on the sections very fast to keep the bees from swarming, for it was late in the season. I had 12 swarms. The last one that I saw pass over my bee-yard, was on Sept. 9. I think that they would have fared better had they remained with me instead of going to the woods. A very fine swarm came to my yard and united with one of my weak colonies, and I thought that they were robbing, but I opened the hive and found everything all right and plenty of honey. Last winter I lost 25 colonies, although they had plenty of honey, and many of the others were very weak, so they needed a great deal of nursing to prepare them for the honey-flow. During the past fall I made a beecellar 12x24 feet and 8 feet high. The walls are plastered with mortar, and the roof is made of matched boards. When it was all dried nicely, I put 120 colonies of bees into it on Nov. 20, piling them up four high all around, and the temperature is 40° above zero the most of the time. They seem to be doing very well now.

• J. C. Thom, M. D., (140-249) Streetsville, Ont., writes:

In a communication to the "Beeton World" of Dec. 18, 1884, I notice that I, as President of the Ontario Bee-Keepers' Association, am called upon by Mr. Allen Pringle to express my views as to the desirability of a change of the organ of that association from the "Canadian Farmer," to that of some periodical devoting itself entirely to bee-culture and its allied interests. At the outset I wish it to be understood that I present my views not as an official of the Ontario Bee-Keepers' Association, but simply as a member and bee-keeper making a specialty of honey-producing. Mr. Pringle asks if the times are not now ripe for establishing a Canadian bee-paper, at the same time proposing Mr. D. A. Jones as its editor. I can only say that if Mr. Jones would undertake the task, no better man could be found to make it a success, and I have no doubt that the Association will at once adopt the new paper as its organ of communication with its members. The interests of honey-producers in Canada (and perhaps also in the United States) have about reached a point where it would be unwise and suicidal for those who expect to continue in the business to encourage their acquaintances, and the rest of mankind, to enter the field (now rapidly being overstocked) of honey-production. Do we not on all sides, in other occupations, hear the

cry of over-production and ruinous competition? Are supply dealers not afraid, by the way in which they are encouraging all and sundry to go into the business, of so injuring specialists, who ought to be their best customers, that in the end it will re-act on their own business? I am not one of those who believe we can induce the general public to consume unlimited quantities of honey at paying figures to the producer, especially with sugar at the present prospective prices. In conclusion then I would say, instead of having the proceedings of our societies published in newspapers devoted to other objects than bee-culture, let us encourage the papers devoted to our special pursuit, and it will assist in putting the evil day of over-production a little farther away; and if a little of the selfishness common to other classes of our fellow mortals were manifested by apiarists, then our pursuit would be placed upon the basis which was lately so ably advocated by Mr. Heddon and others in the columns of the AMERICAN BEE JOURNAL. The trouble of the future, and in fact of the present, I anticipate will not be the problem of producing, wintering, and the general care of an apiary, but the marketing and disposal of products produced with much toil and expense, at such living prices as a man's skill and labor should entitle him to.

• Green R. Shirer (6-9), Greene, © Iowa, on Jan. 7, 1885, writes:

The past season was very fair in this section. White clover and basswood furnished honey profusely, and if full colonies had been managed properly, a good crop would have been obtained, but, as it was, most bee-keepers allowed their bees to swarm at will, and so they got very little surplus honey. There is no one within many miles of here who is posted in bee-keeping, and makes a success of it. Here, bees are allowed to swarm as often as they please, build their combs crosswise in the frames, the moth get among weak colonies, the bees get sick, and their owners do not know what is the matter with them. I sold out in Ohio, last April, and came here, and I soon discovered this to be a good location for honey production. I made some hives, obtained six 3-frame nuclei on June 4, 1884, and on July 4, they averaged ten frames each. On July 20 the strongest colony cast a very large swarm, and in about two weeks cast an after-swarm. I took 125 pounds of surplus comb honey, besides brood-combs enough to winter a colony that I got from a neighbor. My hives are packed inside with chaff, and covered with a snow drift. In the spring I will report on wintering.

• C. Russell, Conesville, © N. Y., writes:

On page 336 of the BEE JOURNAL for 1884, Mr. John Longmate gives a description of his division-board, and wishes any person who thinks he has a better one, to give a description of it in the BEE JOURNAL. I do not know that I have a better one than Mr. L.'s, for I have never used the one which he describes as having a joint in the middle, but after trying half a dozen different styles, I made some after the following plan, which are easily made, and work better than any I have ever tried: They are made of pine boards one inch thick and 1 $\frac{1}{2}$ inches shorter than the hive, inside measure; then, to prevent warping, take two pieces 5-8 by $\frac{1}{4}$ inches, and as long as the division-board is wide, fasten one of these to each end of the board with 5 or 6 finishing-nails, leaving cleats back $\frac{1}{2}$ of an inch from the face of the board, or even with its back. The division-board is now $\frac{3}{4}$ of an inch shorter than the hive, or 3-16 of an inch at each

end of the board. If the board is a little too long, trim it off a little with a plane, then take two rubber strips (I use the tops of old rubber boots) about an inch wide and as long as the cleats, nail one of these with $\frac{1}{4}$ -inch wire nails to each cleat, having one edge of the rubber come against the end of the board where the cleats were set back. Now, to have the division-board work the best the rubber must not be bent over the end of the board, but cut off just 3-16 of an inch beyond the cleats. I do this by turning the board over and placing a strip of wood 3-16 of an inch thick against the cleat, and then cut close against that. The most of the division-boards have spurs in the bottom, made by driving two large brads nearly in, and then filing them to a point. My hives carry a standing frame, and do not need the rabbit in them, but I do not see why they would not work just as well in hanging-frame hives by adding the top-bar of a frame. When this board is placed in the hive, it has a square corner, and not the crevice for propolis that some division-boards have. By the edges of the rubber giving as they do, it can be moved either way without any trouble, and all the time be perfectly tight.

John Motl, Watertown, O. Wis., on Jan. 9, 1885, gives his report as follows:

I began the season of 1884 with 240 colonies, and increased them to 350 colonies which are now in the cellar, and are wintering all right. They are piled up four hives high. I generally put my bees into the cellar during the latter part of November or early in December, whenever I think that the winter is fairly set in. I pay no attention to the condition of the cellar, whether it is wet or dry; but I always keep it dark. I find out at what degree of temperature the bees are the most quiet, and then endeavor to keep the cellar at that temperature. Last winter I lost none of those that I had in the cellar, but I did lose a few weak colonies of those which were wintered out-doors. My honey crop for the season was between 7,000 and 8,000 pounds of comb honey in sections, all of it having been gathered from white clover and basswood. I have sold 6,000 pounds.

W. J. Davis, Youngsville, Pa., writes:

The season of 1884 has been the best for honey and bees, in this locality, that we have had in six years. As reported last spring, I wintered 123 colonies without loss, and afterward I sold 45 colonies, which left me 77, one of which had a barren queen, and was wintered for the purpose of testing a certain vexed question (to be reported in the near future). Two others were worthless by reason of age, but counting the whole number, they produced an average of 35 pounds of comb honey per colony, and I increased them to 201 colonies, which are now in comfortable winter quarters in the very best condition, heavy in natural stores of the best quality, and I have 250 heavy brood-combs as a reserve for spring feeding. When it is remembered that we have no basswood to speak of, and but little grazing is done in this locality, and having sold a number of queens, I consider the above a fair showing. This county (Warren) produces rivers of oil, but not rivers of honey. In speaking of oil, it may not be uninteresting to the readers to say that in some parts of this county immense iron tanks, each holding 20,000 or 30,000 barrels of crude oil, are located as near each other as safety will permit, and are filled through pipes direct from the wells several miles distant. Such tanks are occasionally struck by light-

ning, thus affording a grand illumination at night, and may be seen many miles away.

U. O. Poppleton (114-236), Williamstown, Iowa, on Jan. 5, 1885, writes:

Much sickness in my family during the past three months has caused me to neglect many things that I ought to have done, among others is the making of my annual report. On Dec. 1, 1883, I had 155 colonies in chaff hives; on April 1, 1884, 114 of them were alive, and 41 were dead. Not one of the 41 dead colonies died of bee-diarrrhea, but from starvation, being the first experience of that kind that I have ever had. I can give no reason why the first loss I have ever had from that cause, should have been such a heavy one, as all my bees went into winter quarters in full average condition. Bees, combs, and the interior of the hives were all dry, bright and clean in appearance, thus proving the theory to be erroneous, that dead bees in a hive cause the dampness so often found. The colonies that were yet alive were unusually dry, clean and strong, and were all saved. The 114 colonies have produced 12,500 pounds of extracted honey, being an average of about 110 pounds per colony, nearly all of it being nice, white honey, and of excellent quality. This is my smallest average yield for five years; but I am well satisfied with it, considering the season, which was not good. I have now 236 colonies in winter quarters, 173 of them in chaff hives as usual, and 64 of the weakest in a special repository. On account of so much sickness occurring just at the time of arranging bees for their winter quarters, they were not prepared as well as usual, and I expect to suffer more or less loss, should the winter remain as severe as it has been so far.

Convention Notices.

The Marshall County, Iowa, Bee-Keepers' Association will meet at the Court House in Marshalltown, Iowa, on Saturday, Jan. 17, at 10:30 a. m. Subjects for discussion: Spring management of an apiary and apiarian supplies. Essays: M. A. Jackson, "Over Production," and F. H. Hunt, "Queen-Rearing and How to Italianize an Apiary." A general invitation is extended to bee-keepers outside of our own county. All who have anything that will be of interest to bee-keepers, will please bring it along.
J. W. SANDERS, Sec.

The Cortland Union Bee-Keepers' Association will hold its next meeting at Cortland, N. Y., on Jan. 27, 1885.
M. G. DARBY, Sec.

The Northeastern Michigan Bee-Keepers' Association will hold its third annual convention on Feb. 4, 1885, at Vassar, Mich.
W. Z. HUTCHINSON, Sec.

The regular annual meeting of the Indiana State Bee-Keepers' Association will be held on Thursday and Friday, Jan. 22 and 23, 1885. The meetings will be conducted in the rooms of the State Board of Agriculture, on the corner of Tennessee and Market Streets, in Indianapolis, Ind. It is proposed to make this the most important and interesting meeting of bee-keepers ever held in the State.
FRANK L. DOUGHERTY, Sec.

The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.
E. J. HADLEY, Sec.

The sixteenth annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 21, 22 and 23 of January, 1885. The executive committee are determined to maintain the high standing and enviable reputation which the Association has justly gained in the past, and at the coming convention they propose to outdo all former efforts. The meeting will surely be the largest and most interesting ever held in America. No bee-keeper can afford to stay at home. All are invited. All implements of the apiary sent to the Secretary, will be properly arrayed to compare favorably with others on exhibition, and will be disposed of or returned, as the owner directs. Reduced rates for board at hotels.

GEO. W. HOUSE, Sec.

L. C. ROOT, Pres.

It is proposed to hold an International Bee-Keepers' Congress on the World's Exposition Grounds at New Orleans, La., Feb. 24, 25 and 26, 1885. An interesting programme of subjects of great importance to every bee-keeper in America will be presented and discussed. The disposition of our honey product, with a view to secure better prices will be fully considered. At the same time there will be an Exhibit of Bees and Apiarian Supplies. At the time now selected, the Exposition will be at its best, and excursion rates low. The bee-keepers of our country should lay aside business for a week or two, and make every exertion to attend this Convention. Come prepared with facts, statistics and ideas arranged, to take part in its deliberations.

Dr. J. P. H. Brown, Augusta, Ga.
Dr. N. P. Allen, Smith's Grove, Ky.
W. Williamson, Lexington, Ky.
Dr. O. M. Blanton, Greenville, Miss.
P. L. Viallon, Bayou Goula, La.
Judge W. H. Andrews, McKinney, Tex.
W. S. Hart, New Smyrna, Florida.
S. C. Boylston, Charleston, S. C.
H. C. Austin, Austin's Springs, Tenn.
R. C. Taylor, Wilmington, N. C.
J. W. Porter, Charlottesville, Va.
S. Valentine, Hagerstown, Md.

The eighth annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, at Freeport, Ill., on Jan. 20 and 21, 1885.
JONATHAN STEWART, Sec.

The Mahoning Valley Bee-Keepers' Association will hold its next meeting in the Town Hall at Newton Falls, O., on the third Thursday in January, 1885. The meeting will be instructive as well as interesting.
E. W. TURNER, Sec.
L. CARSON, Pres.

The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. LAWRENCE, Sec.

The Blue Grass Convention will be held at the Court House, Cynthia, Ky., on Monday, Jan. 19, 1885. All are invited to attend.

A. M. COX, Sec.

Special Notices.

The Bee Journal for 1885.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

\$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

\$5.00 for the second largest; **\$4.00** for the third; **\$3.00** for the fourth; **\$2.00** for the fifth; and **\$1.00** for the sixth largest club.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail postpaid.

We will send sample copies free to all who wish them, or desire to get up Clubs. Now is the time to work for the Cash premiums we offer. A large club for the Monthly can be gotten up in almost every locality.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for \$1.25. Or, bound in cloth, with Weekly, \$3.00; with the Monthly, \$1.50.

Premium for Club of 10 Subscribers.

The book for every farmer is the one entitled "Adelphi's Farmer's and Planter's Record and Account Book," in which there is the most systematic, complete and convenient arrangement of headings for every Farm Account and memoranda of all important events which may occur in connection with his business. Every progressive farmer certainly desires to make a success of his occupation, and should adopt every possible means of bringing about that result. He, then, should have a correct knowledge of his entire business, which he can have only by keeping a correct account of every crop produced on his farm, the cost of production of all his live stock and an itemized account of all his expenses. Then at the close of the year, when he takes off his balance sheet, which is admirably arranged in the book above referred to, he will be able to see at a glance whether his farm does or does not pay.

This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is \$3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a present of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with \$20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book.

CLUBBING LIST.

We will supply the American Bee Journal one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The Weekly Bee Journal.....	\$3 00..	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G. Newman) cloth	3 00..	2 75
Bees and Honey (paper covers).....	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 100 colonies	3 25..	3 00
Dzierzon's New Bee Book (cloth).....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.....	3 50..	3 25
Langstroth's Standard Work.....	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing.....	3 00..	2 75
The Weekly Bee Journal one year		
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